

## WHAT IS CLAIMED IS:

1           1.    For use in a digital video player, an apparatus for  
2   displaying a digital still image file using a Moving Picture Expert  
3   Group (MPEG) standard, the apparatus comprising:

4               a controller capable of dividing the digital still image  
5   file into a plurality of sub-picture files, the controller further  
6   capable of constructing an MPEG video stream from the plurality of  
7   sub-picture files; and

8               an MPEG processor capable of decoding the MPEG video  
9   stream to generate a plurality of decoded sub-pictures and scaling  
10   down the plurality of decoded sub-pictures to a plurality of  
11   reduced size decoded sub-pictures.

12           2.   The apparatus as set forth in Claim 1 wherein said MPEG  
13   processor is further capable of storing the plurality of reduced  
14   size decoded sub-pictures in a display buffer.

1           3.    The apparatus as set forth in Claim 2 wherein said MPEG  
2   processor is further capable of displaying contents of the display  
3   buffer only after the MPEG video stream is decoded.

1           4.    The apparatus as set forth in Claim 3 wherein said MPEG  
2   processor is further capable of freezing display of display buffer  
3   contents until a second MPEG video stream is completely decoded.

1           5.    The apparatus as set forth in Claim 1 and further  
2   including decode memory that stores the decoded sub-pictures.

1           6.    The apparatus as set forth in Claim 1 wherein said  
2   controller is further capable of determining a size for each of the  
3   plurality of sub-picture files.

1           7.    The apparatus as set forth in Claim 6 wherein said  
2 controller is capable of determining the size for each of the  
3 plurality of sub-picture files by calculating a quantity of 16 x 16  
4 pixel macro blocks that is less than a maximum quantity of macro  
5 blocks that the MPEG processor can accept and decode.

1           8.    The apparatus as set forth in Claim 7 wherein said  
2 controller is further capable of determining that the size of each  
3 of the plurality of sub-picture files does not exceed a size of the  
4 display buffer.

1           9.    The apparatus as set forth in Claim 7 wherein each of  
2 said sub-picture files can be scaled down by overlapping a current  
3 sub-picture row of macro blocks with a last row of macro blocks  
4 from a subsequent sub-picture file.

1        10. A digital video player capable of displaying a digital  
2 still image from a digital data storage medium, said digital video  
3 player comprising:

4        a controller capable of dividing the digital still image file  
5 into a plurality of sub-picture files, the controller further  
6 capable of constructing an MPEG video stream from the plurality of  
7 sub-picture files; and

8        an MPEG processor capable of decoding the MPEG video stream to  
9 generate a plurality of decoded sub-picture files and scaling down  
10 the plurality of decoded sub-picture files to a plurality of  
11 reduced size decoded sub-picture files.

1        11. The digital video player as set forth in Claim 10 and  
2 further including memory for storing the plurality of decoded sub-  
3 picture files.

1        12. The digital video player as set forth in Claim 10 wherein  
2 said MPEG processor is further capable of storing the plurality of  
3 reduced size decoded sub-pictures in a display buffer.

1        13. The digital video player as set forth in Claim 12 wherein  
2 said MPEG processor is further capable of displaying contents of  
3 the display buffer only after the MPEG video stream is decoded.

1        14. The digital video player as set forth in Claim 13 wherein  
2 said MPEG processor is further capable of freezing display of  
3 display buffer contents until a second MPEG video stream is  
4 completely decoded.

1        15. The digital video player as set forth in Claim 10 wherein  
2        said controller is further capable of determining a size for each  
3        of the plurality of sub-picture files.

1        16. The digital video player as set forth in Claim 15 wherein  
2        said controller is capable of determining the size for each of the  
3        plurality of sub-picture files by calculating a quantity of 16 x 16  
4        pixel macro blocks that is less than a maximum quantity of macro  
5        blocks that the MPEG processor can accept and decode.

1        17. The digital video player as set forth in Claim 16 wherein  
2        said controller is further capable of determining that the size of  
3        each of the plurality of sub-picture files does not exceed a size  
4        of the display buffer.

1        18. The digital video player as set forth in Claim 16 wherein  
2        each of said sub-picture files can be scaled down by overlapping a  
3        current sub-picture row of macro blocks with a last row of macro  
4        blocks from a subsequent sub-picture file.

1           19. For use in a digital video player having a Moving  
2 Picture Expert Group (MPEG) processor, a method for displaying a  
3 digital still image file from the digital video player, the method  
4 comprising the steps of:

5           dividing the digital still image file into a plurality of  
6 sub-picture files;

7           constructing an MPEG video stream file from the plurality  
8 of sub-picture files;

9           decoding the MPEG video stream file to generate a decoded  
10 MPEG video stream file;

11           scaling the decoded MPEG video stream file to a reduced  
12 size video stream file; and

13           transmitting the reduced size video stream file to a  
14 display.

1           20. The method as set forth in Claim 19 further comprising  
2 the step of determining a size for the display prior to scaling the  
3 decoded MPEG video stream file.

21. The method as set forth in Claim 20 further comprising the steps of:

overlapping a last portion of a first sub-picture file with a first row of a subsequent sub-picture file; and

5 coding the reduced size into an MPEG sequence-level header of the MPEG video stream.